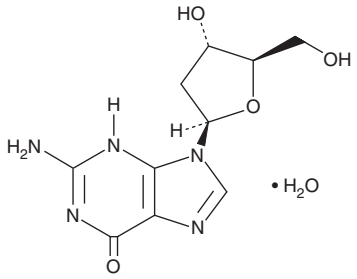
PRODUCT INFORMATION

2'-Deoxyguanosine (hydrate)

Item No. 9002864

CAS Registry No.:	312693-72-4
Formal Name:	2′-deoxy-guanosine, monohydrate
Synonym:	Guanine deoxyriboside
MF:	$C_{10}H_{13}N_5O_4 \bullet H_2O$
FW:	285.3
Purity:	≥98%
UV/Vis.:	λ_{max}: 252 nm
Supplied as:	A solid
Storage:	-20°C
Stability:	≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

2'-Deoxyguanosine (hydrate) is supplied as a solid. A stock solution may be made by dissolving the 2'-deoxyguanosine (hydrate) in the solvent of choice, which should be purged with an inert gas. 2'-Deoxyguanosine (hydrate) is soluble in the organic solvent DMSO at a concentration of approximately 10 mg/ml. 2'-Deoxyguanosine (hydrate) is also soluble in 0.1 M HCl at a concentration of approximately 10 mg/ml.

Description

2'-Deoxyguanosine is a purine nucleoside with diverse biological activities.[1-4] It inhibits the clonogenic growth of HL-60 and K562 leukemia cells (IC_{50}s = 80 and 100 µM, respectively).[1] 2'-Deoxyguanosine inhibits the growth of MOLT-4 T cells and MGL-8 B cells by 99.8 and 68.3%, respectively, when used at a concentration of 50 µM.[2] It increases the number of binucleated cells, a marker of inhibited cytokinesis, in *A. sativum* meristems.[3] 2'-Deoxyguanosine (>1 µM) also induces relaxation of precontracted isolated bovine lingual artery.[4]

References

1. Ross, D.D., Akman, S.A., Schrecker, A.W., *et al.* Effects of deoxynucleosides on cultured human leukemia cell growth and deoxynucleotide pools. *Cancer Res.* **41(11 Pt 1)**, 4493-4498 (1981).
2. Mitchell, B.S., Mejias, E., Daddona, P.E., *et al.* Purinogenic immunodeficiency diseases: Selective toxicity of deoxyribonucleosides for T cells. *Proc. Natl. Acad. Sci. USA* **75(10)**, 5011-5014 (1978).
3. Brulfert, A., Clain, E., and Deysson, G. Deoxyguanosine, a potent cytokinesis inhibitor in plant cells. *Experientia* **30(9)**, 1010-1011 (1974).
4. Scholar, E.M. Effect of deoxypurine and deoxypyrimidine compounds on the vascular responsiveness of bovine coronary and lingual arteries. *J. Pharm. Pharmacol.* **32(10)**, 726 (1980).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM